

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference B03/0145PC	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2004/003108	International filing date (day/month/year) 24.03.2004	Priority date (day/month/year) 25.03.2003
International Patent Classification (IPC) or national classification and IPC		
Applicant BASF AKTIENGESELLSCHAFT		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.
3.	This report is also accompanied by ANNEXES, comprising: <div style="margin-left: 20px;"> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>4</u> sheets, as follows:</p> <div style="margin-left: 20px;"> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> </div> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> </div>
4.	This report contains indications relating to the following items: <div style="margin-left: 20px;"> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p> </div>

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/003108

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-12 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 4-12 _____ received by this Authority on 25.01.2005 with the letter of 24.01.2005
- nos.* 1-3 _____ received by this Authority on 14.06.2005 with the letter of 07.06.2005
- ☐ the drawings:
- sheets _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-12	YES
	Claims		NO
Inventive step (IS)	Claims	1-12	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-12	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
Reference is made to the following documents:			
D1: US-A-2 976 247 (TRUITT JAMES K) 21 March 1961 (1961-03-21)			
D2: WO 02/08354 A (BASF AG; WENDEROTH BERND (DE); SCHAEKER KARLHEINZ (DE)) 31 January 2002 (2002-01-31)			
1. The present application meets the requirements of PCT Article 33(1) because the subject matter of claims 1-12 is novel (PCT Article 33(2)).			
1.1 Document D2 discloses (the references between parentheses refer to that document) antifreeze concentrates based on alkylene glycols or derivatives thereof or on glycerol, containing a) 0.05 to 10 wt.%, relative to the total quantity of concentrate, of one or more carboxylic acid amides and/or sulphonic acid amides, b) 0.05 to 5 wt.%, relative to the total quantity of concentrate, of one or more aliphatic, cycloaliphatic or aromatic amines with 2 to 15 C atoms, which may also contain ether oxygen atoms or hydroxyl groups,			

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and/or c) 0.05 to 5 wt.%, relative to the total quantity of concentrate, of one or more monocyclic or bicyclic, unsaturated or partially unsaturated heterocycles with 4 to 10 C atoms, which may be benzanellated and may carry additional functional groups (claims 1 and 2). The alkylene glycols preferably consist of ethylene glycol or propylene glycol or of mixtures of alkylene glycols or of glycerol with ethylene glycol or propylene glycol, which each contain at least 95 wt.% ethylene glycol and/or propylene glycol and/or glycerol (claim 6).

Also claimed are ready-to-use aqueous coolant compositions (claim 7) and the use of the antifreeze concentrates to produce aqueous coolant compositions for magnesium and/or aluminium.

Monoethylene glycol usually contains a certain amount of diethylene glycol (see D1, examples 1 and 2). As a result of the absence of diethylene glycol, the subject matter of claims 1, 11 and 12 is novel over D2.

2. In the compositions as per D2, polyethylene glycol is present only as an impurity. No effect of this compound is mentioned. It is therefore not obvious to a person skilled in the art to use the claimed polyglycols in known antifreeze (concentrates) in order to improve the protection against corrosion of magnesium (see table 2 of the application). Claims 1 to 12 therefore involve an

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inventive step.

3. The application is industrially applicable, since it can be used in the field of corrosion protection.